

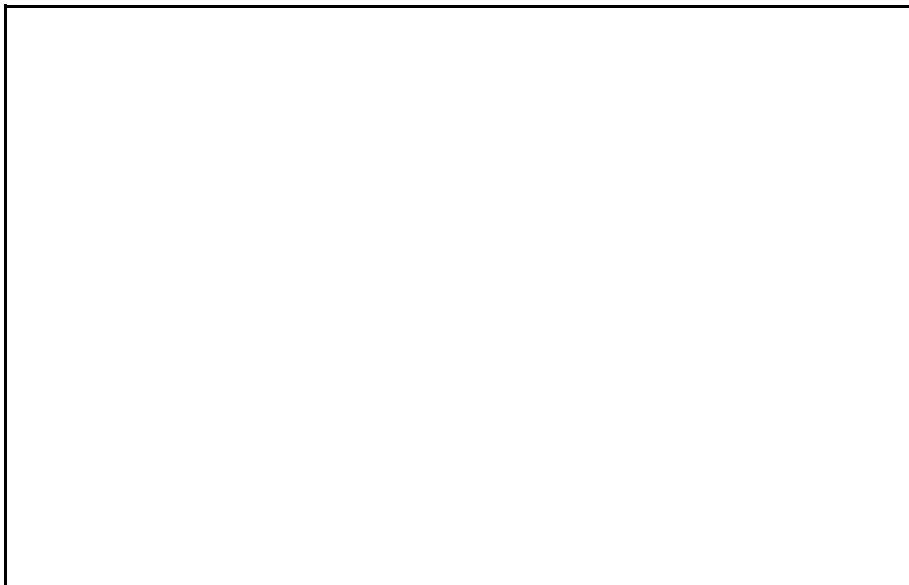


# **582K 08-16 LEGACY™ LINE WITH AXION™ FAN TECHNOLOGY SINGLE PACKAGE ROOFTOP GAS HEAT/ELECTRIC COOLING UNITS**

## **LEGACY™ LINE**

with **Axion™ Fan** Technology

- PERFORMANCE DATA**
- CERTIFIED DIMENSION PRINTS**
- CERTIFIED ROOF CURB DETAILS**



JOB NAME:	LOCATION:	
BUYER:	BUYER PO #:	BRYANT#:
UNIT NUMBER:	MODEL NUMBER:	
PERFORMANCE DATA CERTIFIED BY:		

## DESCRIPTION

582K 08-16 size units are single-packaged electric cooling, gas heating units that are pre-wired and pre-charged with Puron® (R-410A) HFC refrigerant. The units are factory tested in both heating and cooling modes. These units meet the upcoming DOE-2023 (Department of Energy) and ASHRAE (American Society of Heating, Refrigerating, and Air-Conditioning Engineers) 90.1 IEER minimum efficiency requirements. Models use Bryant's leading Axion™ Fan Technology indoor fan system with built in speed control and no fan belts or pulleys. All models have two-stage cooling and single circuit full active evaporator coil design to provide maximum efficiency and comfort control.

## FEATURES

### Standard Base Unit

- Puron (R-410A) HFC refrigerant
- Two-stage/one-circuit cooling capacity control on all models
- 2023 DOE, ASHRAE 90.1 and IECC - IEER energy compliant
- Rated in accordance with AHRI Standard 340/360
- Designed in accordance with Underwriters Laboratories standard 60335-2-40
- Listed by ETL and ETL-Canada
- Non-corrosive composite sloping design; side or center drain condensate pan. Meets ASHRAE Standard 62
- Standard cooling operating range from 40°F up to 125°F (except 115°F on 14 size models) (4°C up to 52°C). Field installable accessory extends the minimum down to -20°F (-29°C).
- Field convertible from vertical to horizontal airflow for slab mounting. Size 16 requires field-supplied duct kit.
- Two-inch disposable return air filters
- Thru-the-bottom power and gas entry capability
- Single point gas and electric connections
- 24-volt control circuit protected with resettable circuit breaker and 75-VA transformer
- Direct Drive - Axion™ Fan Technology indoor fan system uses vane axial fan design and electronically commutated motor:
  - Shall have inherent automatic-reset thermal overload protection
  - Shall require no fan/motor belts for operation, adjustments, and/or initial fan speed setup
  - Shall be internally protected from electrical phase reversal and loss
  - Shall have slow ramp up to speed control capabilities to help reduce sound and comfort issues
  - Shall be a slide-out design with simple screw removal
  - Shall not require VFD fan speed control
- Centralized terminal board facilitating simple safety circuit troubleshooting and simplified control box arrangement
- New unit control board with intuitive quick fan speed adjustment
- Totally enclosed condenser motors with permanently lubricated bearings
- Low-pressure and high-pressure switches

- Mixed air temperature protection
- Low return air temperature protection switch
- Full perimeter base rail with built-in rigging adapters and fork truck slots
- Central Terminal Board for component and unit wiring connections.
- Access panels with easy grip handles and NO-STRIP screw collars
- Pre-painted exterior panels and primer-coated interior panels tested to 500 hours salt spray protection
- Fully insulated cabinet
- Tool-less filter access door

### Refrigerant System

- TXV refrigerant metering system
- Liquid line filter drier
- Tandem Scroll compressors with internal line-break overload protection
- Copper tube, aluminum fin evaporator coils
- Round Tube/Plate Fin (RTPF) condenser coils on all model sizes

### Gas Heat

- IGC solid-state gas heat exchanger control for on-board diagnostics, anti-cycle protection, LED error code designation, burner control logic and energy saving indoor fan motor delay
- Gas efficiencies up to 82%
- Designed in accordance with ANSI Z21.47 (design and test standard for gas furnaces) and ANSI Z233.1 (National Fuel Gas code relating to appliance installation requirements)
- Induced negative draft combustion system
- Redundant gas valve, with up to 2 stages of heating
- Flame roll-out safety protector
- Solid-state electronic direct spark ignition system

### Standard Limited Parts Warranty

- 15-year limited on all gas heat exchanger parts - Stainless Steel
- 10-year limited on all gas heat exchanger parts - Aluminized
- 5-year limited on all compressor parts
- 5-year parts on Factory Installed Ultra Low Leak Economizer
- 1-year limited on all parts

## PERFORMANCE DATA

Unit Operating Weight \_\_\_\_\_ lb

### COOLING

Gross Total Capacity \_\_\_\_\_ Btuh

at Condenser Air Temperature \_\_\_\_\_ °F

Gross Sensible Capacity \_\_\_\_\_ Btuh

Compressor Power Input \_\_\_\_\_ kW

Indoor Entering: db \_\_\_\_\_ °F / wb \_\_\_\_\_ °F

Airflow \_\_\_\_ CFM External Static Pressure \_\_\_\_ in. wg

Indoor Fan Motor Size \_\_\_\_\_ HP

Exhaust Fan Motor Size \_\_\_\_\_ HP

Curb Weight \_\_\_\_\_ lb

### HEATING (GAS)

Heating Capacity:

Stage 1 \_\_\_\_\_ Btuh

Stage 2 \_\_\_\_\_ Btuh

Heating Capacity Total \_\_\_\_\_ Btuh

Stage 1 \_\_\_\_\_ kW

Stage 2 \_\_\_\_\_ kW

Heating Capacity Total \_\_\_\_\_ kW

## ELECTRICAL DATA

Power Supply to Unit \_\_\_\_\_

Volts \_\_\_\_\_

Phase \_\_\_\_\_ Hz

Maximum Circuit Amps \_\_\_\_\_

Maximum Overcurrent Protection \_\_\_\_\_

## SUBMITTAL DATA

Job Name \_\_\_\_\_

Architect \_\_\_\_\_

Engineer \_\_\_\_\_

Contractor \_\_\_\_\_

Unit Designation \_\_\_\_\_



Use of the AHRI Certified TM Mark indicates a manufacturer's participation in the program. For verification of certification for individual products, go to [www.ahridirectory.org](http://www.ahridirectory.org).



## FACTORY-INSTALLED OPTIONS

**Economizer with DRY BULB Sensing and Barometric Relief**

Low Leak Air Dampers —

- Models with W7220 controller meet California Title 24-2016 (Section 120.2) for Fault Detection and Diagnostic (FDD) requirements (EconoMi\$er X system).

**Economizer with ENTHALPY Sensing and Barometric Relief**

Low Leak Air Dampers —

- Models with W7220 controller meet California Title 24-2016 (Section 120.2) Fault Detection and Diagnostic (FDD) requirements (EconoMi\$er X system).

**Economizer with DRY BULB Sensing and Barometric Relief**

ULTRA LOW LEAK Air Dampers —

- Models with W7220 controller meet California Energy Commission Title 24-2016 perspective section 140.4 (damper leakage, etc.), and mandatory section 120.2.i for Fault Detection and Diagnostic controls. Economizers meet ASHRAE 90.1-2016 damper leakage requirements as stated in section 6.5.1.1.4 and Table 6.4.3.4.3, and meet 2016 Fault Detection and Diagnosis requirements in section 6.4.3.12. For outside air, return, and relief air damper leakage requirements economizers meet IECC 2012 section C402.4.5.2 and, IECC 2015 sections C403.2.4.3 and C403.3.3.5 and IECC 2015 section C403.2.4.7 for Fault Detection and

Diagnostic requirements.

NOTE: IECC 2015 section C403.2.4.7.1 requires differential return air sensor, which must be ordered separately.

Outside air, return air, and relief air (volume) dampers are AMCA rated — plus 5 year limited parts warranty (EconoMi\$er X system).

**Economizer with ENTHALPY Sensing and Barometric Relief**

ULTRA LOW LEAK Air Dampers —

- Models with W7220 controller meet California Energy Commission Title 24-2016 perspective section 140.4 (damper leakage, etc.), and mandatory section 120.2.i for Fault Detection and Diagnostic controls. Economizers meet ASHRAE 90.1-2016 damper leakage requirements as stated in section 6.5.1.1.4 and Table 6.4.3.4.3, and meet 2016 Fault Detection and Diagnosis requirements in section 6.4.3.12. For outside air, return, and relief air damper leakage requirements economizers meet IECC 2012 section C402.4.5.2 and, IECC 2015 sections C403.2.4.3 and C403.3.3.5 and IECC 2015 section C403.2.4.7 for Fault Detection and Diagnostic requirements.

NOTE: IECC 2015 section C403.2.4.7.1 requires differential return air sensor, which must be ordered separately.

Outside air, return air, and relief air (volume) dampers are AMCA rated — plus 5 year limited parts warranty (EconoMi\$er X system).

## FACTORY-INSTALLED OPTIONS (CONT)

- Through the base connectors for gas and electric conduit/piping
- Stainless steel gas heat exchanger (includes tubes, vestibule plate and collector box)
- Perfect Humidity™ adaptive dehumidification system
- Non-fused disconnect
- Powered 115-volt convenience outlet
- Non-powered 115-volt convenience outlet
- High static evaporator fan motor
- Return Air smoke detector
- Supply Air smoke detector
- CO<sub>2</sub> sensor
- Condenser hail guard-louvered style
- Special coating protection for evaporator and condenser coils
- Hinged access doors
- Condensate overflow switch
- Phase Monitor/Protection

### Optional Warranties

- Complete unit parts only, up to 5 years
- Complete unit parts and labor, up to 5 years

Many other optional warranties are available. See the Commercial Start-Up and Optional Extended Warranty Price pages for further information.

## FIELD-INSTALLED ACCESSORIES

### Economizer with DRY BULB Sensing and Barometric Relief

Standard Leak Air Dampers —

- Models with W7212 controller provide standard non-diagnostic control. EconoMi\$er® IV.
- Models with W7220 controller meet California Title 24-2016 Section 120.2.i for Fault Detection and Diagnostic (FDD) requirements. EconoMi\$er X.

### Economizer with ENTHALPY Sensing and Barometric Relief

Standard Leak Air Dampers —

- Models with W7212 controller provide standard non-diagnostic control. EconoMi\$er IV.
- Models with W7220 controller meet California Title 24-2016 Section 120.2.i Fault Detection and Diagnostic (FDD) requirements. EconoMi\$er X.

### Economizer with DRY BULB Sensing and Barometric Relief

ULTRA LOW LEAK Air Dampers —

- Models with W7220 controller meet California Energy Commission Title 24-2016 perspective section 140.4 (damper leakage, etc.), and mandatory section 120.2.i for Fault Detection and Diagnostic controls. Economizers meet ASHRAE 90.1-2016 damper leakage requirements as stated in section 6.5.1.1.4 and Table 6.4.3.4.3, and meet 2016 Fault Detection and Diagnosis requirements in section 6.4.3.12. For outside air, return, and relief air damper leakage requirements economizers meet IECC 2012

section C402.4.5.2 and, IECC 2015 sections C403.2.4.3 and C403.3.3.5 and IECC 2015 section C403.2.4.7 for Fault Detection and Diagnostic requirements.

NOTE: IECC 2015 section C403.2.4.7.1 requires differential return air sensor, which must be ordered separately.

Outside air, return air, and relief air (volume) dampers are AMCA rated.

### Economizer with ENTHALPY Sensing and Barometric Relief

ULTRA LOW LEAK Air Dampers —

- Models with W7220 controller meet California Energy Commission Title 24-2016 perspective section 140.4 (damper leakage, etc.), and mandatory section 120.2.i for Fault Detection and Diagnostic controls. Economizers meet ASHRAE 90.1-2016 damper leakage requirements as stated in section 6.5.1.1.4 and Table 6.4.3.4.3, and meet 2016 Fault Detection and Diagnosis requirements in section 6.4.3.12. For outside air, return, and relief air damper leakage requirements economizers meet IECC 2012 section C402.4.5.2 and, IECC 2015 sections C403.2.4.3 and C403.3.3.5 and IECC 2015 section C403.2.4.7 for Fault Detection and Diagnostic requirements.

NOTE: IECC 2015 section C403.2.4.7.1 requires differential return air sensor, which must be ordered separately.

Outside air, return air, and relief air (volume) dampers are AMCA rated.

## FIELD-INSTALLED ACCESSORIES (CONT)

- Prop fan power exhaust
- Two-position motorized outdoor air damper
- Manual outside air damper 25%
- Manual outside air damper 50%
- Roof Curb — 14 inch (356 mm) tall
- Roof Curb — 24 inch (610 mm) tall
- Thru-the-bottom connections (electrical only)
- Thru-the-bottom connections (electrical and gas)
- Condenser hail guard (louvered style)
- Flue shield
- Flue discharge deflector
- Liquid propane (LP) conversion kit
- High altitude conversion kit
- Winter start kit, down to 25°F (-4°C)
- Phase monitor (loss of phase/phase reversal)
- Low ambient head pressure controller, down to 0°F (-18°C)
- UVC high output lights
- MERV-8 filter kits
- MERV-13 filter kits

- 4 in. filter racks
- Time Guard II compressor anti-cycle protection
- Thermostats and Sensors
- Condensate overflow switch
- Non-powered 115-volt (20 amp) convenience outlet
- Side access hinged filter door kit
- Horn/strobe annunciator

### Size 16 Only

- Disconnect switch bracket
- Supply duct cover

### Economizer Sensors

- Single Dry bulb control
- Differential Dry bulb control
- Single enthalpy control
- Differential enthalpy control
- CO<sub>2</sub> — wall mounted
- CO<sub>2</sub> — duct mounted
- CO<sub>2</sub> — unit mounted

# CERTIFIED DIMENSION PRINT

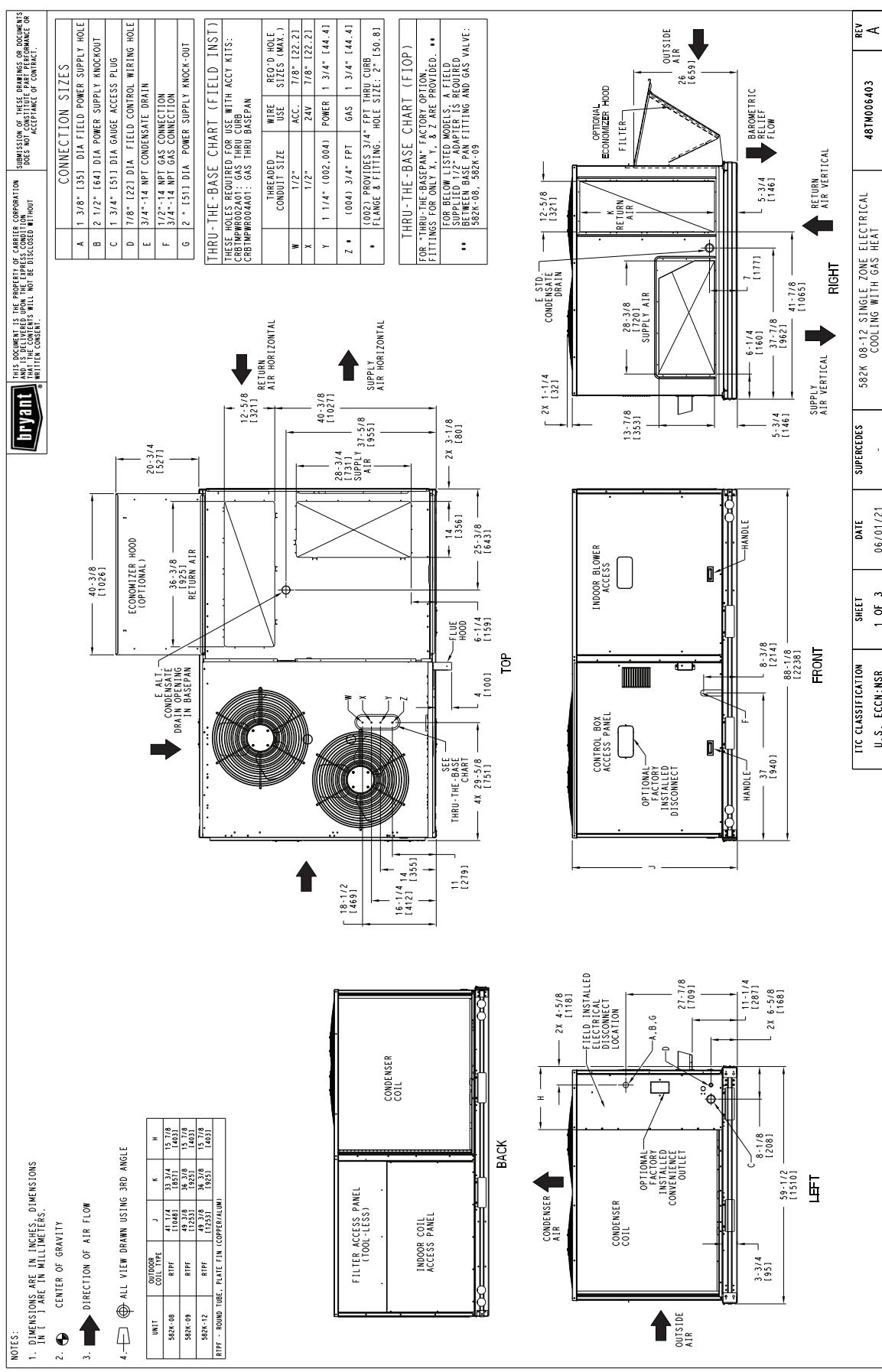


Fig. 1 — 582K\*\* 08-12 Unit Dimensional Drawing

ITC CLASSIFICATION	SHEET NO.	DATE	SUPERSEDES	REV
U.S. ECON-NR	1 OF 3	06/01/21		A

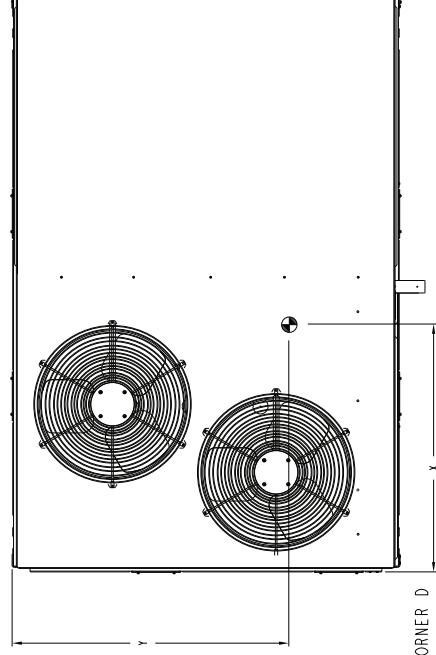
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# CERTIFIED DIMENSION PRINT

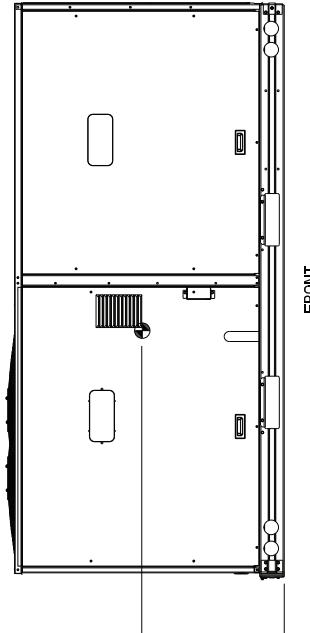
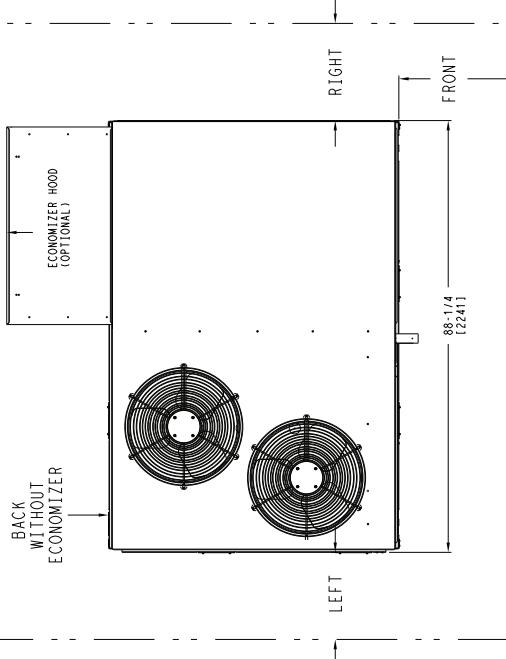
UNIT	OUTDOOR COIL TYPE	STD. UNIT WEIGHT***	UNIT WEIGHT(A)	CORNER (A) WEIGHT(B)	CORNER (C) WEIGHT(C)	CORNER (D) WEIGHT(D)	C.G.
582K-08	RIPF	787	357	82	150	68	207
582K-09	RIPF	868	394	197	89	160	73
582K-12	RIPF - ROUND TUBE, PLATE FIN (COOPER/ALUM)	818	398	213	97	175	80

\*\*\* STANDARD UNIT WEIGHT IS WITH LOW GAS HEAT AND WITHOUT PACKAGING.  
FOR OTHER OPTIONS AND ACCESSORIES, REFER TO THE PRODUCT DATA CATALOG.

CORNER A



CORNER B



NOTE:

1. FOR ALL MINIMUM CLEARANCES LOCAL CODES OR JURISDICTIONS MAY PREVAIL.

CLEARANCE			
SURFACE	SERVICE WITH CONDUCTIVE BARRIER	SERVICE WITH NONCONDUCTIVE BARRIER	OPERATING CLEARANCE
FRONT	48 [1219mm]	36 [914mm]	18 [457mm]
LEFT	48 [1219mm]	42 [1167mm]	18 [457mm]
BACK W/O ECON	48 [1219mm]	42 [1167mm]	18 [457mm]
BACK W/ECON	36 [914mm]	36 [914mm]	18 [457mm]
RIGHT	36 [914mm]	36 [914mm]	18 [457mm]
TOP	72 [1829mm]	72 [1829mm]	72 [1829mm]

ITC CLASSIFICATION U.S. ECON: NSR	SHEET 2 OF 3	DATE 06/01/21	SUPERSEDES 582K 08-12 SINGLE ZONE ELECTRICAL COOLING WITH GAS HEAT	REV 4B1M006403
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A

Fig. 1 — 582K\*\* 08-12 Unit Dimensional Drawing (cont)

# CERTIFIED DIMENSION PRINT

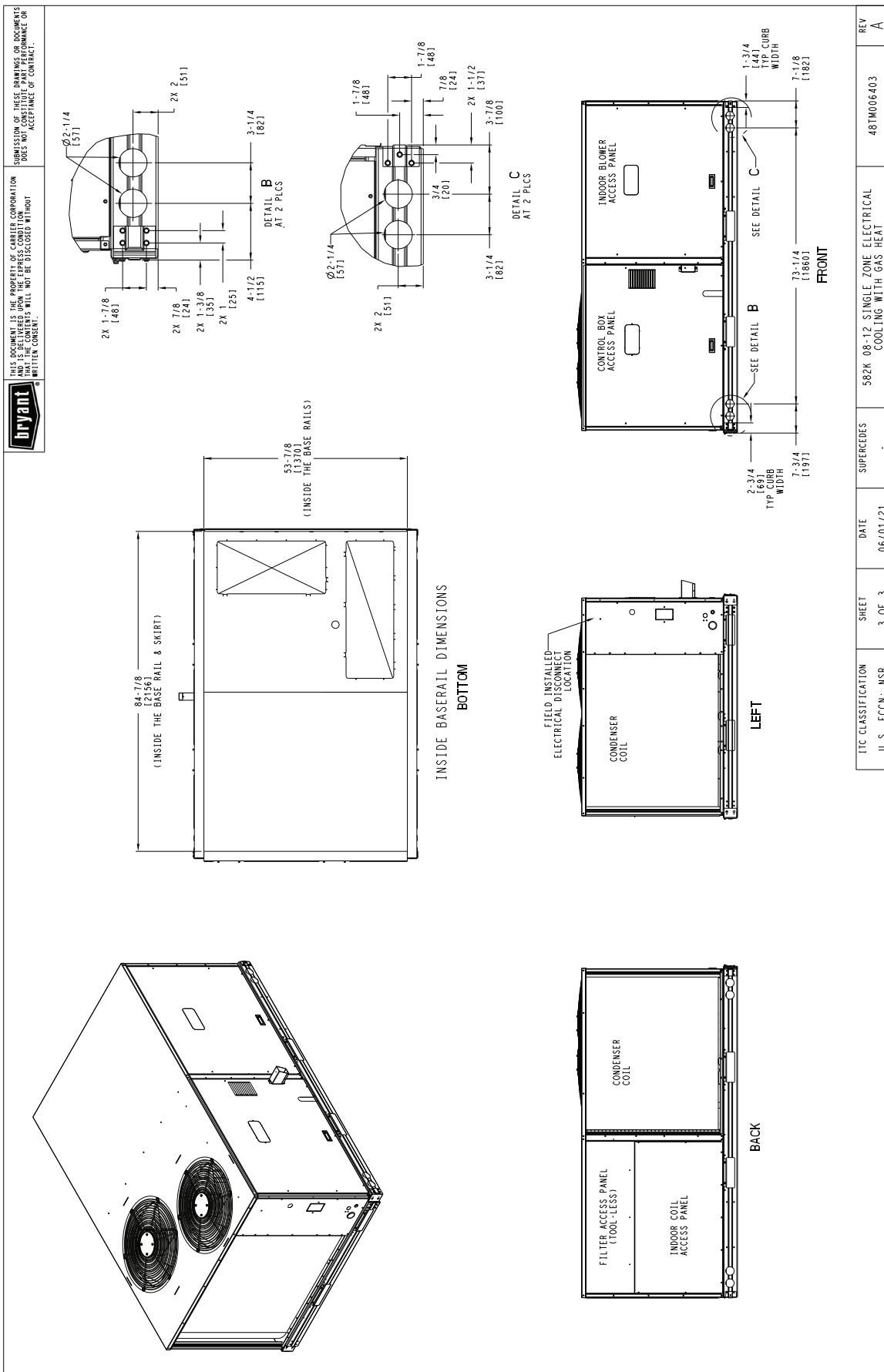


Fig. 1 — 582K\*\* 08-12 Unit Dimensional Drawing (cont)

CERTIFIED DIMENSION PRINT

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- 1. DIMENSIONS ARE IN INCHES. DIMENSIONS  
IN [ ] ARE IN MILLIMETERS.**

**2. CENTER OF GRAVITY**

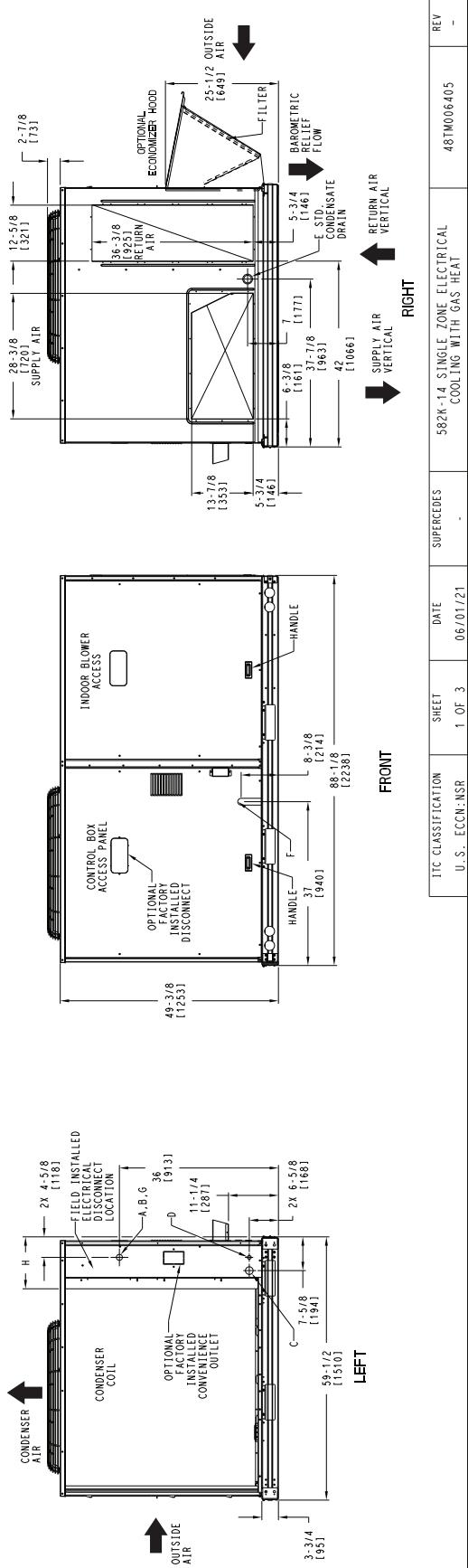
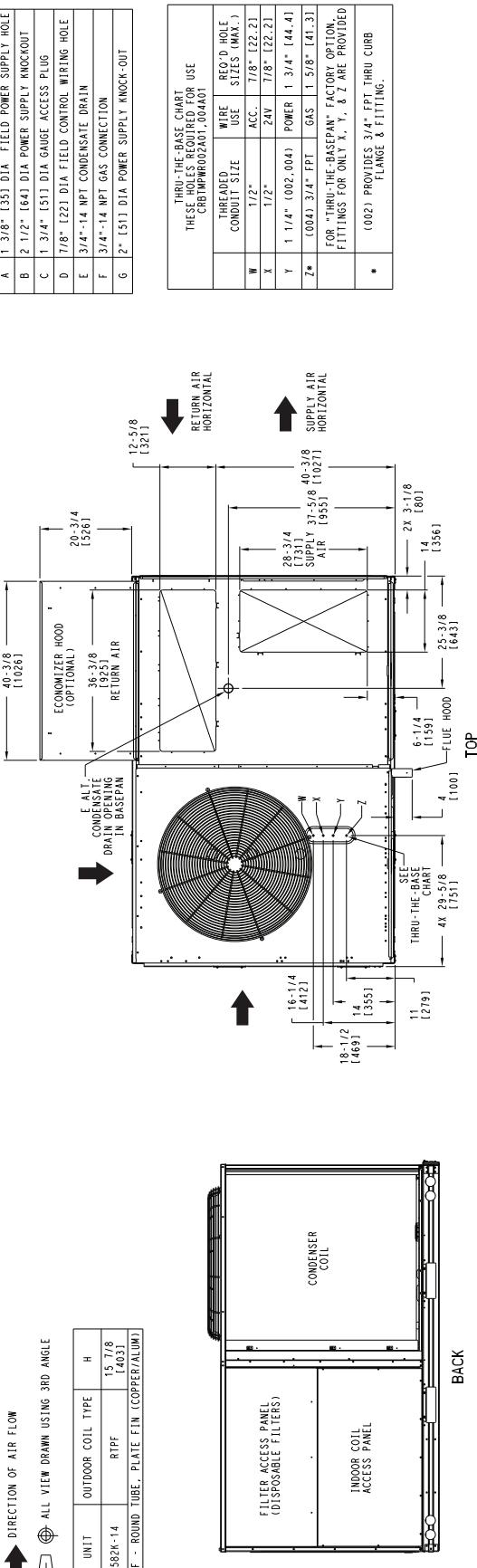
**3. DIRECTION OF AIR FLOW**

**4. ALL VIEW DRAWN USING 3RD ANGLE**

**NO SELL WHERE THE UPFRONT CONDITIONER IS NOT SOLD. THIS CONTRACTOR AGREEMENT WILL NOT BE DISSEMINATED WITHOUT WRITTEN CONSENT.**

CONNECTION SITES		
A	1 3/8" [35] DIA FIELD POWER SUPPLY HOLE	
B	2 1/2" [64] DIA POWER SUPPLY KNOCKOUT	
C	1 3/4" [51] DIA GAUGE ACCESS PLUG	
D	7/8" [22] DIA FIELD CONTROL WIRING HOLE	
E	3/4" - 14 NPT CONDENSATE DRAIN	
F	3/4" - 14 NPT GAS CONNECTION	
G	2" [51] DIA POWER SUPPLY KNOCK-OUT	

**58ZK-14 RPF - ROUND TUBE, PLATE FIN (COPPER/ALUM)**



**Fig. 2 — 582K\*\* 14 Unit Dimensional Drawing**

# CERTIFIED DIMENSION PRINT

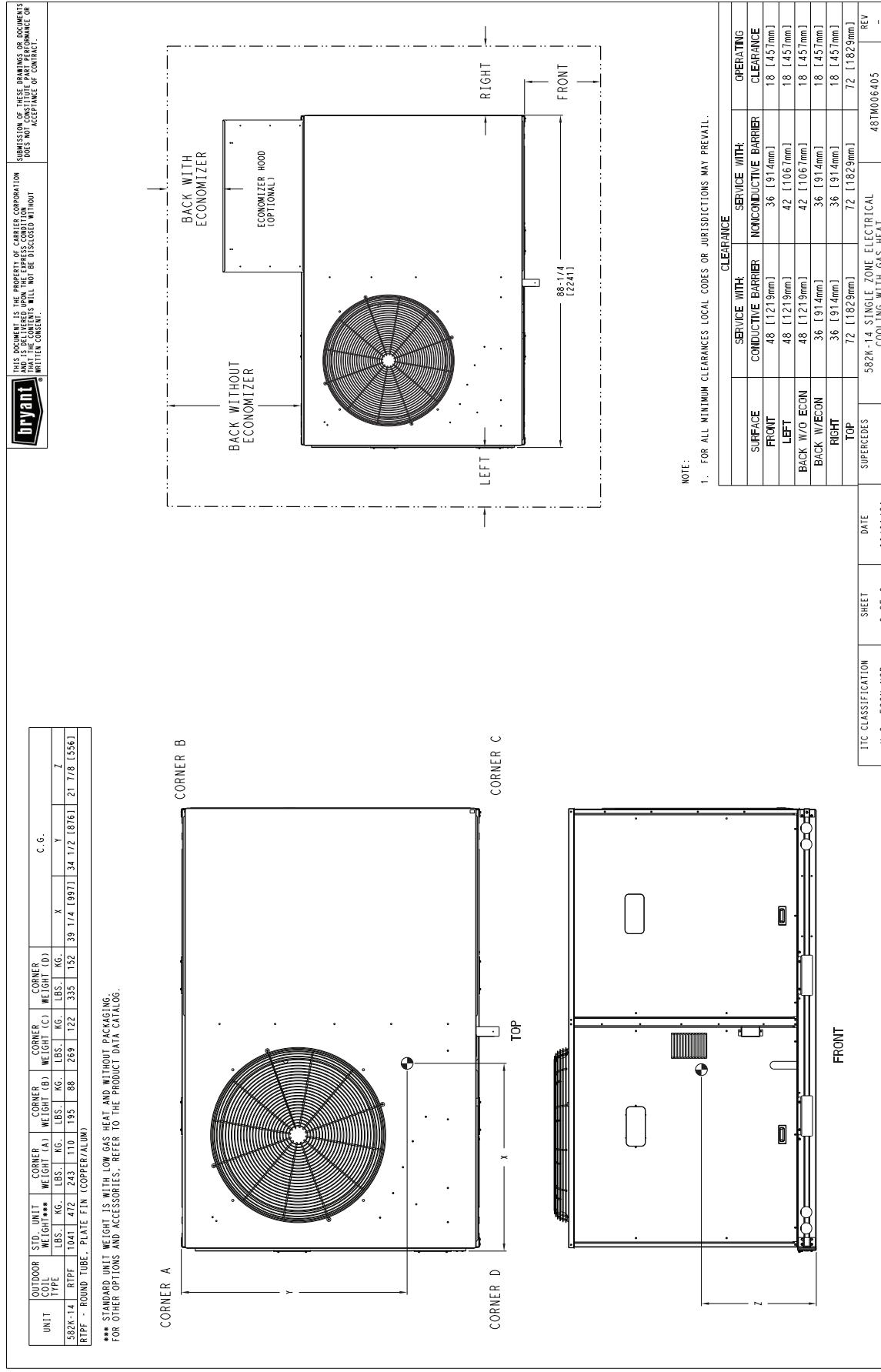
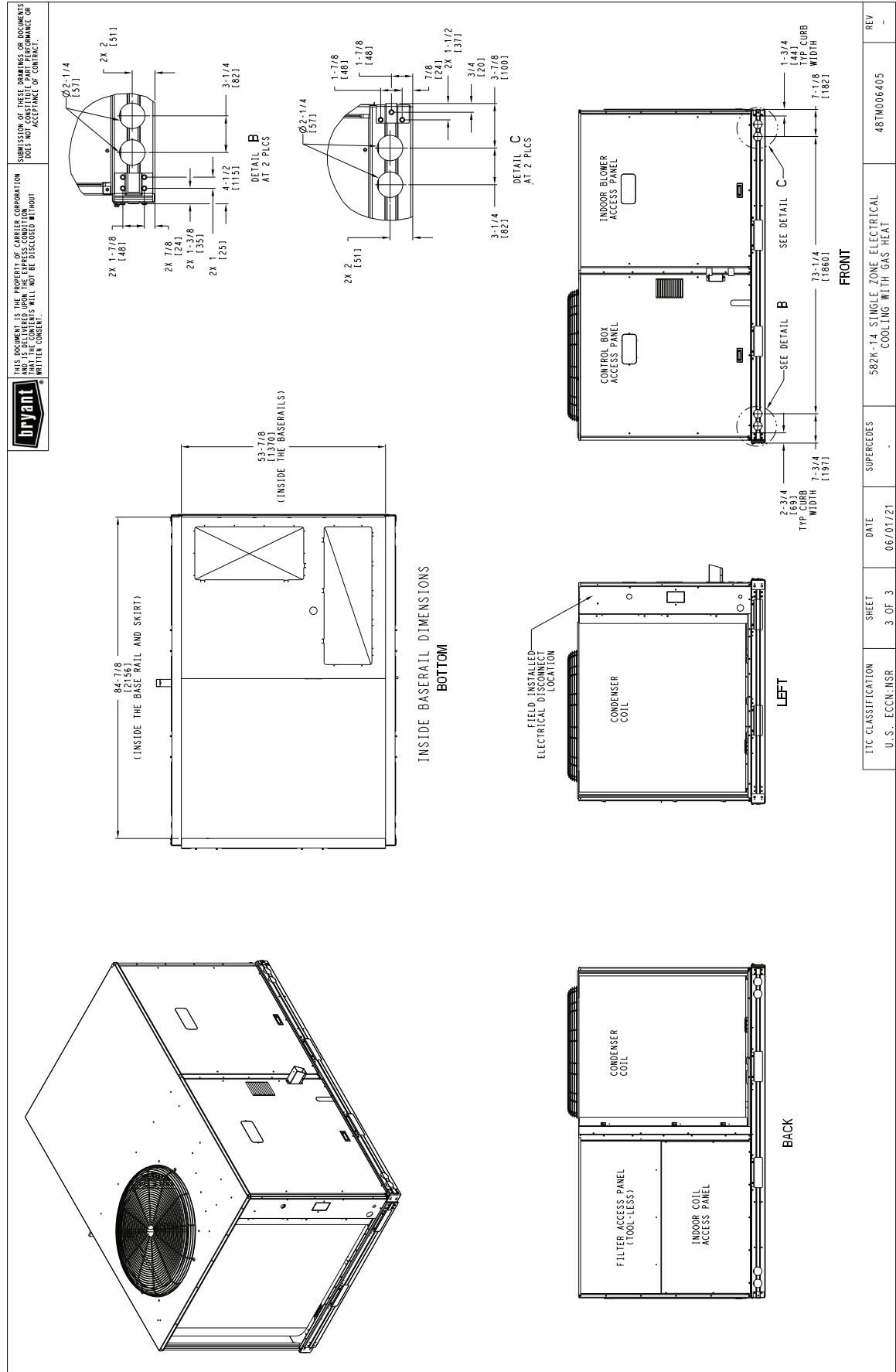


Fig. 2 — 582K\*\* 14 Unit Dimensional Drawing (cont)

CERTIFIED DIMENSION PRINT



**Fig. 2 — 582K\*\* 14 Unit Dimensional Drawing (cont)**

CERTIFIED DIMENSION PRINT

NOTES:

1. DIMENSIONS ARE IN INCHES. DIMENSIONS  
IN [ ] ARE IN MILLIMETERS.
2. CENTER OF GRAVITY

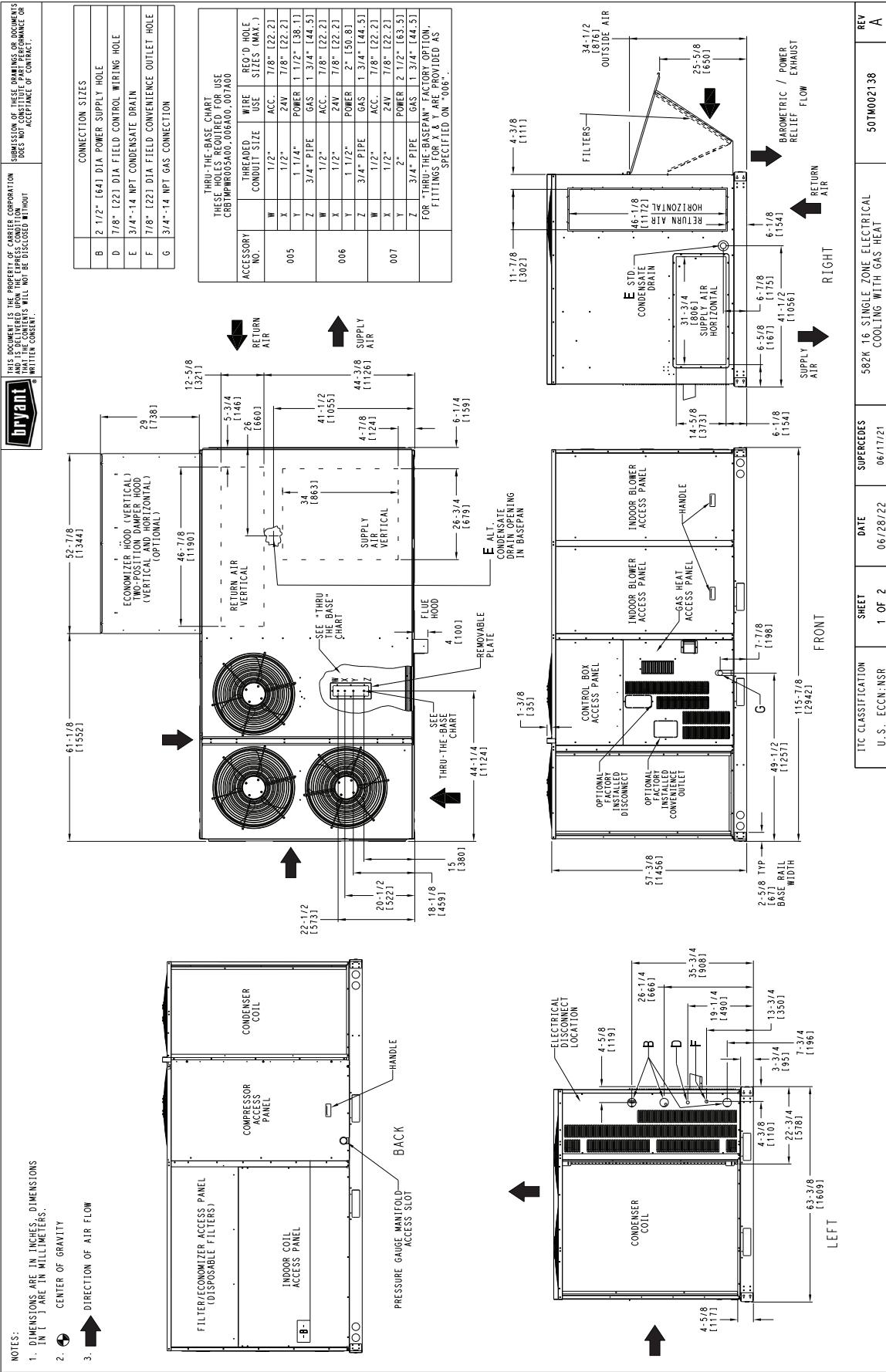


Fig. 3 — 582K\*\*16 Unit Dimensional Drawing

## CERTIFIED DIMENSION PRINT

UNIT	STD UNIT WEIGHT LBS.	CORNER WEIGHT (A) LBS.	CORNER WEIGHT (B) LBS.	CORNER WEIGHT (C) LBS.	CORNER WEIGHT (D) LBS.	C.G. LBS.	LBS.	LBS.	LBS.	LBS.	LBS.	LBS.	LBS.							
	582K*16	1408	639	313	169	341	55	332	150	362	164	55	318	[140]	31	14	7941	21	18	[5377]
STANDARD UNIT WEIGHT IS WITH LOW HEAT & WITHOUT PACKAGING. FOR OPTIONS & ACCESSORIES, REFER TO THE PRODUCT DATA CATALOG.																				

STANDARD UNIT WEIGHT IS WITH LOW HEAT & WITHOUT PACKAGING.  
FOR OPTIONS & ACCESSORIES, REFER TO THE PRODUCT DATA CATALOG.

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Bryant®

Submission of these drawings or documents  
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U.S. E&C/N:SR

2 OF 2

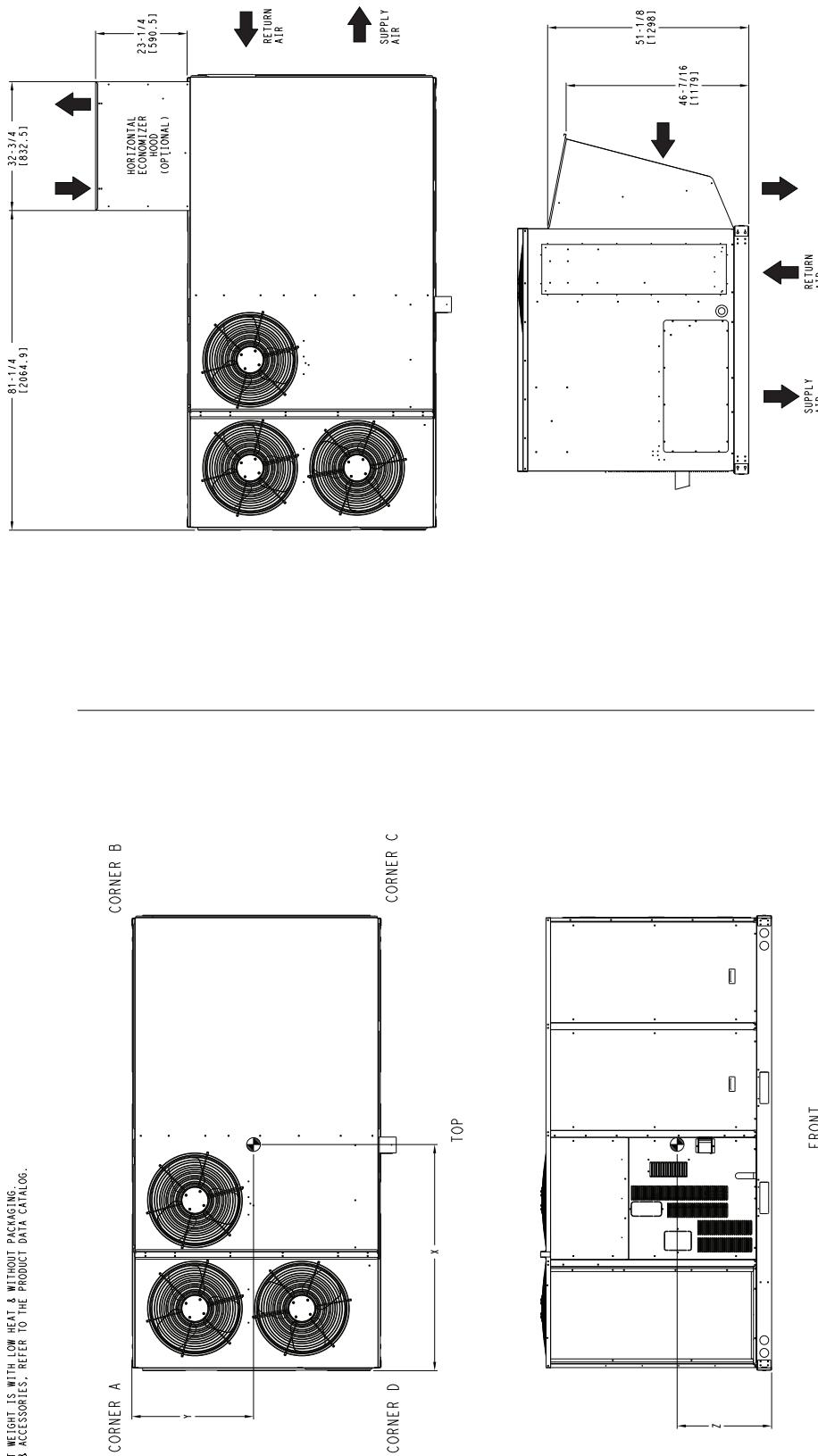
DATE 06/28/22

SUPERDES 06/17/21

582K 16 SINGLE ZONE ELECTRICAL  
COOLING WITH GAS HEAT

50TM002138

REV A

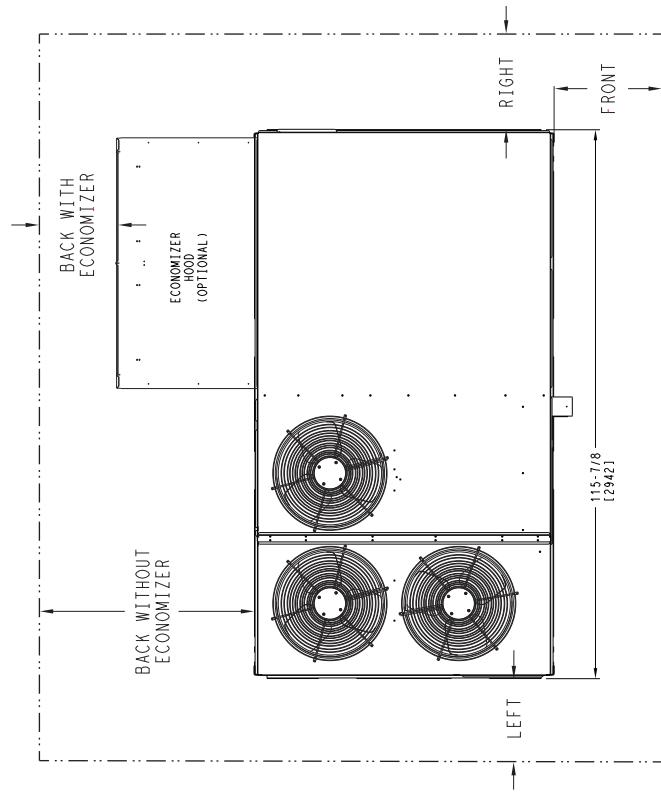


HORIZONTAL ECONOMIZER

ITC CLASSIFICATION	SHEET	DATE	SUPERDES	582K 16 SINGLE ZONE ELECTRICAL COOLING WITH GAS HEAT	50TM002138	REV
U.S. E&C/N:SR	2 OF 2	06/28/22	06/17/21			A

Fig. 3 — 582K\*16 Unit Dimensional Drawing (cont)

## CERTIFIED DIMENSION PRINT



CLEARANCE			
SURFACE	Service with Conductive Barrier	Service with Non-conductive Barrier	Operating Clearance
FRONT	48 in. (1219 mm)	36 in. (914 mm)	18 in. (457 mm)
LEFT	48 in. (1219 mm)	42 in. (1067 mm)	18 in. (457 mm)
<b>BACK W/O ECONOMIZER</b>	48 in. (1219 mm)	42 in. (1067 mm)	18 in. (457 mm)
<b>BACK W/ ECONOMIZER</b>	36 in. (914 mm)	36 in. (914 mm)	18 in. (457 mm)
RIGHT	36 in. (914 mm)	36 in. (914 mm)	18 in. (457 mm)
LEFT	72 in. (1829 mm)	72 in. (1829 mm)	72 in. (1829 mm)

NOTE: For all minimum clearances local codes or jurisdictions may prevail.

Fig. 4 — 582K\*16 Base Unit Dimensions – Clearances

## CERTIFIED ROOF CURB DETAILS

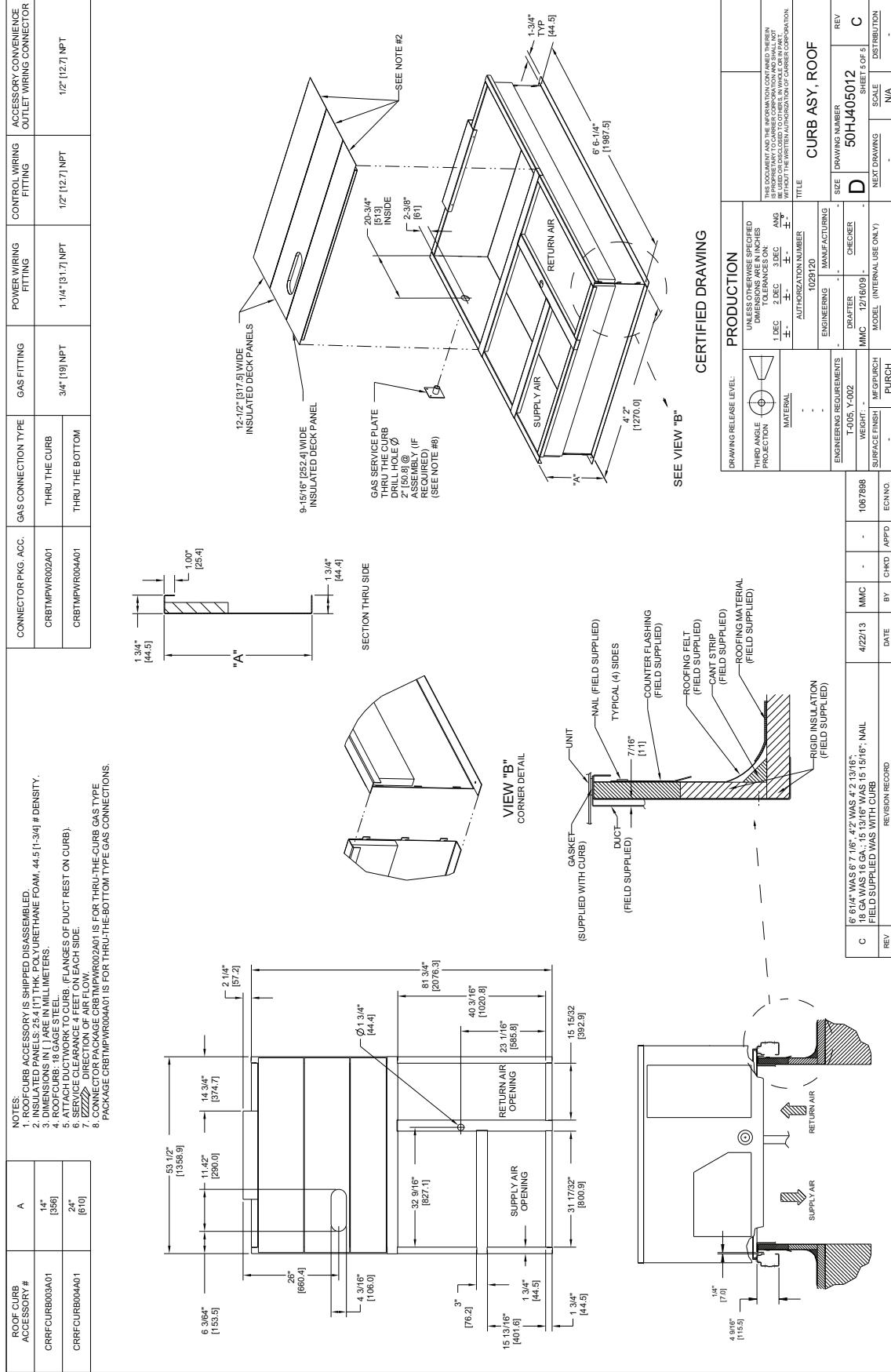


Fig. 5 — 582K\*\*08-14 Roof Curb Details

## CERTIFIED ROOF CURB DETAILS

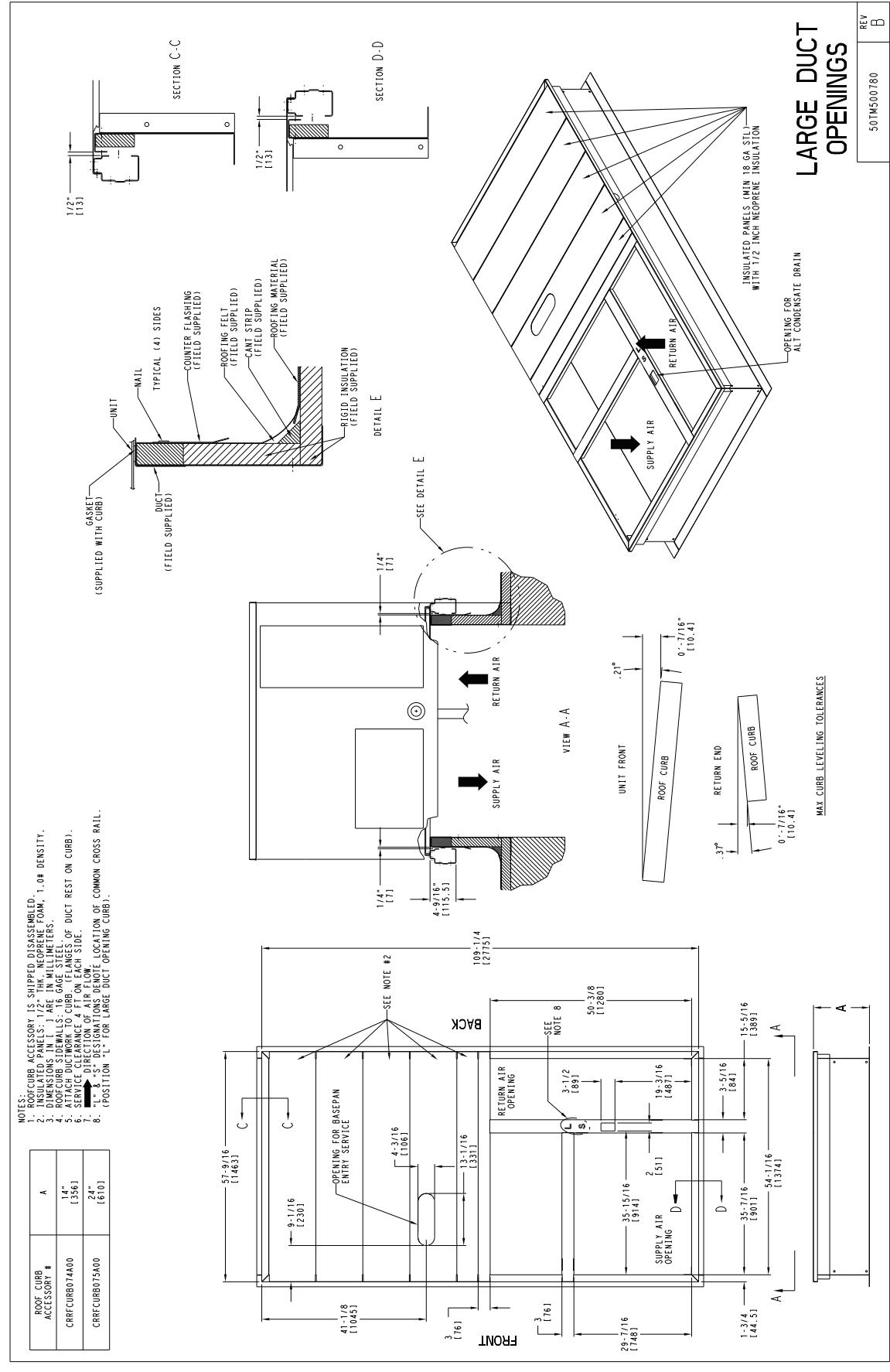


Fig. 6 — 582K\*\*16 Roof Curb Details